

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

LISTING OF THE CLAIMS

An identifier indicating the status of each claim is provided.

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1-27. (Canceled)

28. (Previously Presented) An editing apparatus, comprising:

first decoding means for decoding a first encoded bit stream to generate a first base band signal;

second decoding means for decoding a second encoded bit stream to generate a second base band signal;

detecting means for matching phases of the first base band signal, the second base band signal, and a third base band signal, and comparing these signals to detect an edit position at which the first base band signal and the second base band signal are connected, the third base band signal being obtained by editing the first base band signal and the second base band signal;

re-encoding means for re-encoding the third base band signal to generate a third encoded bit stream; and

controlling means for controlling said re-encoding means to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to the edit position detected by said detecting means to re-encode the third base band signal.

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

29. (Previously Presented) The editing apparatus as set forth in claim 28, wherein said controlling means controls said re-encoding means to re-encode the third base band signal only in a predetermined period including the edit position detected by said detecting means.

30. (Previously Presented) The editing apparatus as set forth in claim 28, further comprising:

selecting means for selecting the third encoded bit stream generated by said re-encoding means in the predetermined period including the edit position and selecting one of the first encoded bit stream and the second encoded bit stream in other than the predetermined period.

31. (Previously Presented) The editing apparatus as set forth in claim 28, wherein said detecting means matches the phases of the signals of each picture and compares the signals to detect the edit position of each picture.

32. (Previously Presented) The editing apparatus as set forth in claim 31, wherein said controlling means controls said re-encoding means to selectively re-use the first codec information and the second codec information of each picture corresponding to the edit position of each picture to re-encode the third base band signal.

33. (Previously Presented) The editing apparatus as set forth in claim 31, wherein said detecting means obtains the difference of pixels in the same spatial position of pictures of the first base band signal and the third base band signal to detect the edit position of each picture.

U.S. Apph. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

34. (Previously Presented) The editing apparatus as set forth in claim 31, wherein said detecting means obtains the difference of pixels in the same spatial position of pictures of the second base band signal and the third base band signal to detect the edit position of each picture.

35. (Previously Presented) The editing apparatus as set forth in claim 33, wherein said detecting means detects a picture of which the difference of the pixels is not zero as the edit position.

36. (Previously Presented) The editing apparatus as set forth in claim 34, wherein said detecting means detects a picture of which the difference of the pixels is not zero as the edit position.

37. (Previously Presented) The editing apparatus as set forth in claim 35, wherein said detecting means detects a picture having a predetermined number of pixels whose difference is not zero as the edit position.

38. (Previously Presented) The editing apparatus as set forth in claim 36, wherein said detecting means detects a picture having a predetermined number of pixels whose difference is not zero as the edit position.

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

39. (Previously Presented) The editing apparatus as set forth in claim 31, wherein when a picture of the first base band signal and a picture of the second base band signal are present at the edit position of each picture, said controlling means controls said re-encoding means to match the phases of the signals of each macro block, compares the signals, and selectively re-uses the first codec information and the second codec information of each macro block to re-encode the third base band signal.

40. (Previously Presented) The editing apparatus as set forth in claim 31, further comprising:

determining means for determining the picture type of a picture at the edit position detected by said detecting means,

wherein said controlling means detects a prediction objective picture at the edit position corresponding to the picture type determined by said determining means to determine whether to re-use the first codec information and the second codec information of each picture.

41. (Previously Presented) The editing apparatus as set forth in claim 40, wherein when the prediction objective picture is not present in the third base band signal, said control means does not re-use the first codec information and the second codec information.

42. (Previously Presented) The editing apparatus as set forth in claim 40, further comprising:

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

setting means for setting a picture flag that identifies the presence of a prediction objective picture at the edit position corresponding to the picture type determined by said determining means,

wherein said controlling means references the picture flag that is set by said setting means to determine whether to re-use the first codec information and the second codec information of each picture.

43. (Previously Presented) The editing apparatus as set forth in claim 39, further comprising:

determining means for determining the macro block type of a macro block at the edit position detected by said detecting means,

wherein said controlling means detects a prediction objective macro block at the edit position corresponding to the macro block type determined by said determining means to determine whether to re-use the first codec information and the second codec information of each macro block.

44. (Previously Presented) The editing apparatus as set forth in claim 43, further comprising:

setting means for setting a macro block flag that identifies the presence of a prediction objective macro block at the edit position corresponding to the macro block type determined by said determining means,

wherein said controlling means references the macro block flag that is set by said setting means to determine whether to re-use the first codec information and the second codec information of each macro block.

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

45. (Previously Presented) An editing apparatus, comprising:

first decoding means for decoding a first encoded bit stream to generate a first base band signal;

second decoding means for decoding a second encoded bit stream to generate a second base band signal;

detecting means for matching the phases of the first base band signal and a third base band signal and comparing these signals to detect an edit position at which the first base band signal and the second base band signal are connected, the third base band signal being obtained by editing the first base band signal and the second base band signal;

re-encoding means for re-encoding the third base band signal to generate a third encoded bit stream; and

controlling means for controlling said re-encoding means to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to the edit position detected by said detecting means to re-encode the third base band signal.

46. (Previously Presented) An editing apparatus, comprising:

first decoding means for decoding a first encoded bit stream to generate a first base band signal;

second decoding means for decoding a second encoded bit stream to generate a second base band signal;

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

detecting means for matching the phases of the second base band signal and a third base band signal and comparing these signals to detect an edit position at which the first base band signal and the second base band signal are connected, the third base band signal being obtained by editing the first base band signal and the second base band signal;

re-encoding means for re-encoding the third base band signal to generate a third encoded bit stream; and

controlling means for controlling said re-encoding means to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to the edit position detected by said detecting means to re-encode the third base band signal.

47. (Previously Presented) A re-encoding apparatus, comprising:

detecting means for matching the phases of a first base band signal, a second base band signal, and a third base band signal and comparing these signals to detect an edit position at which the first base band signal and the second base band signal are connected, the first base band signal being obtained by decoding a first encoded bit stream, the second base band signal being obtained by decoding a second encoded bit stream, the third base band signal being obtained by editing the first base band signal and the second base band signal;

re-encoding means for re-encoding the third base band signal to generate a third encoded bit stream; and

controlling means for controlling said re-encoding means to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

the second encoded bit stream or second codec information used to generate the second base band signal corresponding to the edit position detected by said detecting means to re-encode the third base band signal.

48. (Previously Presented) A re-encoding apparatus, comprising:

detecting means for matching the phases of a first base band signal and a third base band signal and comparing these signals to detect an edit position at which the first base band signal and the second base band signal are connected, the first base band signal being obtained by decoding a first encoded bit stream, the third base band signal being obtained by editing the first base band signal and a second base band signal, the second base band signal being obtained by decoding a second encoded bit stream;

re-encoding means for re-encoding the third base band signal to generate a third encoded bit stream; and

controlling means for controlling said re-encoding means to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to the edit position detected by said detecting means to re-encode the third base band signal.

49. (Previously Presented) A re-encoding apparatus, comprising:

detecting means for matching the phases of a second base band signal and a third base band signal and comparing these signals to detect an edit position at which a first base band signal and the second base band signal are connected, the second base band signal being obtained

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

by decoding a second encoded bit stream, the third base band signal being obtained by editing the first base band signal and the second base band signal, the first base band signal being obtained by decoding a first encoded bit stream;

re-encoding means for re-encoding the third base band signal to generate a third encoded bit stream; and

controlling means for controlling said re-encoding means to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to the edit position detected by said detecting means to re-encode the third base band signal.

50. (Previously Presented) A re-encoding apparatus, comprising:

re-encoding means for re-encoding a third base band signal to generate a third encoded bit stream, the third base band signal being obtained by editing a first base band signal and a second band signal, the first base band signal being obtained by decoding a first encoded bit stream, the second base band signal being obtained by decoding a second encoded bit stream; and

controlling means for controlling said re-encoding means to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to an edit position at which the first base band signal and the second base band signal are connected and that is detected by matching the phases of the first base band

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

signal, the second base band signal, and the third base band signal and comparing these signals to re-encode the third base band signal.

51. (Previously Presented) A re-encoding apparatus, comprising:

re-encoding means for re-encoding a third base band signal to generate a third encoded bit stream, the third base band signal being obtained by editing a first base band signal and a second band signal, the first base band signal being obtained by decoding a first encoded bit stream, the second base band signal being obtained by decoding a second encoded bit stream; and

controlling means for controlling said re-encoding means to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to an edit position at which the first base band signal and the second base band signal are connected and that is detected by matching the phases of the first base band signal and the third base band signal and comparing these signals to re-encode the third base band signal.

52. (Previously Presented) A re-encoding apparatus, comprising:

re-encoding means for re-encoding a third base band signal to generate a third encoded bit stream, the third base band signal being obtained by editing a first base band signal and a second band signal, the first base band signal being obtained by decoding a first encoded bit stream, the second base band signal being obtained by decoding a second encoded bit stream; and

U.S. Appln. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

controlling means for controlling said re-encoding means to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to an edit position at which the first base band signal and the second base band signal are connected and that is detected by matching the phases of the second base band signal and the third base band signal and comparing these signals to re-encode the third base band signal.

53. (Previously Presented) An editing method, comprising the steps of:
decoding a first encoded bit stream to generate a first base band signal;
decoding a second encoded bit stream to generate a second base band signal;
matching the phases of the first base band signal, the second base band signal, and a third base band signal, and comparing these signals to detect an edit position at which the first base band signal and the second base band signal are connected, the third base band signal being obtained by editing the first base band signal and the second base band signal;
re-encoding the third base band signal to generate a third encoded bit stream; and
controlling the re-encoding step to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to the edit position detected at the detecting step to re-encode the third base band signal.

54. (Previously Presented) An editing method, comprising the steps of:
decoding a first encoded bit stream to generate a first base band signal;

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

decoding a second encoded bit stream to generate a second base band signal;
matching the phases of the first base band signal and a third base band signal and
comparing these signals to detect an edit position at which the first base band signal and a second
base band signal are connected, the third base band signal being obtained by editing the first base
band signal and the second base band signal;

re-encoding the third base band signal to generate a third encoded bit stream; and
controlling the re-encoding step to selectively re-use the first encoded bit stream
or first codec information used to generate the first base band signal and the second encoded bit
stream or second codec information used to generate the second base band signal corresponding
to the edit position detected at the detecting step to re-encode the third base band signal.

55. (Previously Presented) An editing method, comprising the steps of:

decoding a first encoded bit stream to generate a first base band signal;
decoding a second encoded bit stream to generate a second base band signal;
matching the phases of the second base band signal and a third base band signal
and comparing these signals to detect an edit position at which the first base band signal and a
second base band signal are connected, the third base band signal being obtained by editing the
first base band signal and the second base band signal;

re-encoding the third base band signal to generate a third encoded bit stream; and
controlling the re-encoding step to selectively re-use the first encoded bit stream
or first codec information used to generate the first base band signal and the second encoded bit
stream or second codec information used to generate the second base band signal corresponding
to the edit position detected at the detecting step to re-encode the third base band signal.

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

56. (Previously Presented) A re-encoding method, comprising the steps of:

matching the phases of a first base band signal and a third base band signal and comparing these signals to detect an edit position at which the first base band signal and the second base band signal are connected, the first base band signal being obtained by decoding a first encoded bit stream, the third base band signal being obtained by editing the first base band signal and a second base band signal, the second base band signal being obtained by decoding a second encoded bit stream;

re-encoding the third base band signal to generate a third encoded bit stream; and

controlling the re-encoding step to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to the edit position detected at the detecting step to re-encode the third base band signal.

57. (Previously Presented) A re-encoding method, comprising the steps of:

matching the phases of a second base band signal and a third base band signal and comparing these signals to detect an edit position at which a first base band signal and the second base band signal are connected, the second base band signal being obtained by decoding a second encoded bit stream, the third base band signal being obtained by editing the first base band signal and the second base band signal, the first base band signal being obtained by decoding a first encoded bit stream;

re-encoding the third base band signal to generate a third encoded bit stream; and

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

controlling the re-encoding step to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to the edit position detected at the detecting step to re-encode the third base band signal.

58. (Previously Presented) A re-encoding method, comprising the steps of:

matching the phases of a first base band signal, a second base band signal, and a third base band signal and comparing these signals to detect an edit position at which the first base band signal and the second base band signal are connected, the first base band signal being obtained by decoding a first encoded bit stream, the second base band signal being obtained by decoding the second encoded bit stream, the third base band signal being obtained by editing the first base band signal and the second base band signal;

re-encoding the third base band signal to generate a third encoded bit stream; and

controlling the re-encoding step to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to the edit position detected at the detecting step to re-encode the third base band signal.

59. (Previously Presented) A re-encoding method, comprising the steps of:

re-encoding a third base band signal to generate a third encoded bit stream, the third base band signal being obtained by editing a first base band signal and a second base band signal, the first base band signal being obtained by decoding a first encoded bit stream, the second base band signal being obtained by decoding a second encoded bit stream; and

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

controlling the re-encoding step to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to an edit position at which the first base band signal and the second base band signal are connected and that is detected by matching the phases of the first base band signal and the third base band signal and comparing these signals to re-encode the third base band signal.

60. (Previously Presented) A re-encoding method, comprising the steps of:

re-encoding a third base band signal to generate a third encoded bit stream, the third base band signal being obtained by editing a first base band signal and a second base band signal, the first base band signal being obtained by decoding a first encoded bit stream, the second base band signal being obtained by decoding a second encoded bit stream; and

controlling the re-encoding step to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to an edit position at which the first base band signal and the second base band signal are connected and that is detected by matching the phases of the second base band signal and the third base band signal and comparing these signals to re-encode the third base band signal.

61. (Previously Presented) A re-encoding method, comprising the steps of:

re-encoding a third base band signal to generate a third encoded bit stream, the third base band signal being obtained by editing a first base band signal and a second base band

U.S. Appl. No. 09/381,190
Reply to Office Action dated April 14, 2006

PATENT
450106-4749

signal, the first base band signal being obtained by decoding a first encoded bit stream, the second base band signal being obtained by decoding a second encoded bit stream; and

controlling the re-encoding step to selectively re-use the first encoded bit stream or first codec information used to generate the first base band signal and the second encoded bit stream or second codec information used to generate the second base band signal corresponding to an edit position at which the first base band signal and the second base band signal are connected and that is detected by matching the phases of the first base band signal, the second base band signal, and the third base band signal and comparing these signals to re-encode the third base band signal.